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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/468,230	12/21/1999	TROY J. LIEBL	SPX01-P-393	3380

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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 10/07/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/468,230

Applicant(s)

LIEBL ET AL.

Examiner

Christian La Forgia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. Claims 1 through 29 are presented for examination.

Drawings

2. The informal drawings filed in this application are acceptable for examination purposes.

When the application is allowed, applicant will be required to submit new formal drawings.

3. The Patent and Trademark Office no longer makes drawing changes. See 1017 O.G. 4.

It is applicant's responsibility to ensure that the drawings are corrected. Corrections must be made in accordance with the instructions below.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

Timing of Corrections

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Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Specification

4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
5. The use of the trademark Altera has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.
6. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 through 7, 11 through 17, and 21 through 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,134,48 to Sasaki et al., hereinafter Sasaki, in lieu of obviousness.

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9. As per claim 1, Sasaki teaches a method for preventing unauthorized downloading of software into a diagnostic tool, comprising the steps of:

providing a first external storage device that is electrically coupled to the diagnostic tool, the first external storage device including a first security signature (Figures 1 [block 7], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18);

providing a second external storage device that is electrically coupled to the diagnostic tool, the second external storage device including software (Figure 1 [blocks 30, 33]; column 4, line 59 to column 5, line 7); and

downloading the software into an internal storage device of the diagnostic tool when a second security signature included within the diagnostic tool is the same as the first security signature included within the first external storage device (column 4, lines 50-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

10. Regarding claims 2 and 12, Sasaki teaches wherein the first external storage device is a smart card that provides the first security signature to the diagnostic tool through a smart card reader (Figure 1 [blocks 7, 28], 7 [block 7], 20 [block 7]; column 4, lines 49-58).

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11. Regarding claims 3 and 13, Sasaki teaches wherein the second external storage device is electrically coupled to the diagnostic tool through a serial port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It is inherent to the system of Sasaki to provide a serial port to interface to the host computer.

12. With regards to claims 4 and 14, Sasaki teaches wherein the serial port is a USB port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a USB port. One would be motivated to include a USB port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer.

13. With regards to claims 5 and 15, Sasaki teaches wherein the serial port is a RS232 port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a RS232 port. One would be motivated to include a RS232 port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer.

14. With regards to claims 6 and 16, Sasaki teaches wherein the serial port is an IrDA compatible infrared port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the

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invention was made to include a IrDA port. One would be motivated to include a IrDA port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer. Additionally, the IrDA port offers more flexibility as it is not inhibited by any wires.

15. With regards to claims 7 and 17, Sasaki teaches wherein the serial port is an IEEE 1394 port (Figure 1 [blocks 24, 30]; column 4, lines 16-29; column 4, line 59 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an IEEE 1394 port. One would be motivated to include an IEEE 1394 port because they are easy to set up and maintain, and offer a reliable high-speed connection between the diagnostic tool and the host computer.

16. As per claim 11, Sasaki teaches a diagnostic tool for communicating with a plurality of motor vehicle control units, the diagnostic tool preventing the unauthorized downloading of software into the diagnostic tool, the diagnostic tool comprising:

a processor for controlling the downloading of software into the diagnostic tool (Figure 1 [block 20]; column 4, lines 30-41);

a first port for electrically coupling the processor to a first storage device, the first storage device including a first security signature (Figures 1 [block 7], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18); and

a second port for electrically coupling the processor to a second storage device, the second storage device including software, wherein the diagnostic tool downloads the software

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into a third storage device located within the diagnostic tool when a second security signature stored within the diagnostic tool is the same as the first security signature included within the first storage device (Figure 1 [blocks 24, 30, 33]; column 4, line 50 to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

17. Regarding claims 21, 26, and 29, Sasaki teaches wherein the first storage device is a smart card and the second storage device is a flash ROM (Figure 1 [blocks 7, 28], 7 [block 7], 20 [block 7]; column 4, line to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second storage device a flash ROM. One would be motivated to do so as it would allow for the storage of updates and data.

18. Regarding claim 22, Sasaki teaches wherein the first storage device is a smart card and the second storage device is an EEPROM (Figure 1 [blocks 7, 28], 7 [block 7], 20 [block 7]; column 4, line to column 5, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second storage device a EEPROM. One would be motivated to do so as it would allow for the storage of updates and data.

19. Regarding claim 23, Sasaki teaches further including:

a keypad coupled to the processor for receiving input from a user, the user initiating the downloading of the software by selecting a particular menu item from a list of menu items (Figure 1 [block 26]; column 4, lines 16-29); and

a display coupled to the processor for providing the list of menu items to the user of the diagnostic tool (Figure 1 [block 27]; column 4, lines 16-29).

20. As per claim 24, Sasaki teaches a method for preventing unauthorized downloading of software into a diagnostic tool, comprising the steps of:

providing an external storage device that is electrically coupled to the diagnostic tool, the external storage device including a first security signature and software (Figures 1 [block 7], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18); and

downloading the software into a memory of the diagnostic tool when a second security signature included within the diagnostic tool is the same as the first security signature included within the external storage device (column 4, lines 50-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

21. Regarding claims 25 and 28, Sasaki teaches further including the step of:

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storing the second security signature of the diagnostic tool as the first security signature on the external storage device when the first security signature is determined to be a default value (Figure 1 [blocks 30, 33]; column 4, line 50 to column 5, line 7).

22. As per claim 27, Sasaki teaches a diagnostic tool for communicating with a plurality of motor vehicle control units, the diagnostic tool preventing the unauthorized downloading of software by the diagnostic tool, the diagnostic tool comprising:

a processor for executing the software (Figure 1 [block 20]; column 4, lines 30-41);

a port for electrically coupling the processor to an external storage device, the external storage device including a first security signature and software, where the diagnostic tool downloads the software into a memory of the diagnostic tool when a second security signature included within the diagnostic tool is the same as the first security signature included within the external storage device (Figures 1 [blocks 7, 24, 30, 33], 7 [block 7], 20 [block 7]; column 4, lines 52-58; column 5, lines 7-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two security signatures. One would be motivated to include the signatures as it would create a method to ensure the external storage device was what it claimed to be. By verifying the external storage device it prevents corrupting the diagnostic tool. Other instances of using an external storage device with matching signature authentication can be seen in U.S. Patent No. 6,525,672 to Chainer et al.

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23. Claims 8 through 10 and 18 through 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki in view of United States Patent No. 6,148,400 to Arnold, hereinafter Arnold.

24. Regarding claims 8 and 18, Sasaki does not teach:

modifying the first security signature upon successful downloading of the software into the internal storage device located within the diagnostic tool.

25. Arnold teaches further comprising the step of:

modifying the first security signature upon successful downloading of the software into the internal storage device located within the diagnostic tool (Figure 3 [block 320]; column 14, lines 36-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first signature after downloading the software. One would be motivated to modify the first signature as it would prevent someone from reusing the first external storage device to access the data for a second time.

26. With regards to claims 9 and 19, Sasaki does not teach wherein the first security signature is modified so that it cannot be further utilized to download the software into any diagnostic tool.

27. Arnold teaches wherein the first security signature is modified so that it cannot be further utilized to download the software into any diagnostic tool (Figure 3 [block 320]; column 14, lines 36-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first signature after downloading the software. One would be motivated to modify the first signature as it would prevent someone from reusing the first external storage device to access the data for a second time.

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28. Concerning claims 10 and 20, Sasaki does not teach wherein the first security signature is erased.

29. Arnold teaches wherein the first security signature is erased (Figure 3 [block 320]; column 14, lines 36-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to erase the first signature after downloading the software. One would be motivated to modify the first signature as it would prevent someone from reusing the first external storage device to access the data for a second time.

Double Patenting

30. Claims 1 through 29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 18 of U.S. Patent No. 6,236,917. Although the conflicting claims are not identical, they are not patentably distinct from each other because one of ordinary skill in the art at the time the invention was made would appreciate the additional verification and security being claimed in the instant application. One would be motivated to include the additional security features because it would hinder, if not outright prevent, people from diagnosing their own vehicular problems. This would be beneficial as it would prevent misdiagnoses or botched attempts at repairs.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

32. The following patents are cited to further show the state of the art with respect to diagnostic tools, such as:

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United States Patent No. 5,278,759 to Berra et al., which is cited to show a system and method for reprogramming vehicle computers.

United States Patent No. 5,541,840 to Gurne et al., which is cited to show a hand held automotive diagnostic tool.

United States Patent No. 6,456,716 to Arnold, which is cited to show an apparatus and method for establishing a cryptographic link between elements in a system.

United States Patent No. 6,181,992 to Gurne et al., which is cited to show a hand held automotive diagnostic tool.

United States Patent No. 5,916,286 to Seashore et al., which is cited to show a portable automotive diagnostic tool.

United States Patent No. 5,705,743 to Leonard et al., which is cited to show a method for identifying parameter identifiers of a motor vehicle.

United States Patent No. 5,938,716 to Shutty et al., which is cited to show a system for customizing a vehicle's engine control computer.

United States Patent No. 6,167,344 to Fackler et al., which is cited to show a process for operating a controller with a programmable memory.

United States Patent No. 4,975,847 to Abe et al., which is cited to show a diagnosis system for a motor vehicle.

United States Patent No. 5,003,477 to Abe et al., which is cited to show a diagnosis system for a motor vehicle.

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33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704.

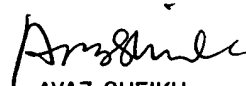
The examiner can normally be reached on Monday thru Thursday 7-5.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

35. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Christian LaForgia
Patent Examiner
Art Unit 2131

clf


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100